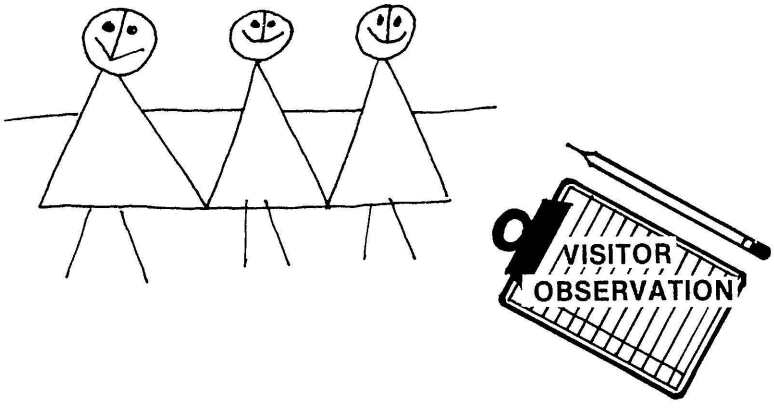
RESEARCH CIRCULAR 280 SEPTEMBER 1984

Unobtrusive Observation

A Visitor Study Technique



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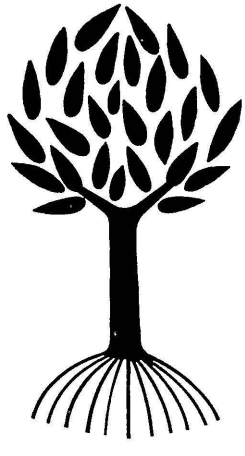

The Ohio State University
Ohio Agricultural Research and Development Center
Wooster, Ohio

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A Guide to Unobtrusive Observation[1]

GARY W. MULLINS and JOHN L. HEYWOOD[2]

INTRODUCTION

Natural resource areas which have been set aside for the protection of their priceless natural diversity ai also valued as sites for leisure enjoyment and sociable learning. Ongoing research projects designed to investigate the unique flora and fauna of these areas are common and indepth; yet, corresponding studies which could provide insight into visitors' relationships with these areas are not as plentiful nor as well developed. One method which would yield such information is unotrusive observation—a technique for recording information about various visitor behaviors, characteristics, and activities in a predetermined sampling fashion in such a way that the visitor is unaware of the study.

Systematically collected information regarding use of natural resource areas by visitors will aid in the social resource management programs for these sites Such knowledge can assist in the determination of a visitor-conscious site design, will permit the targeting of public relations efforts, can lead to reduced impacts upon the resource, and will assist in enhancing visitors' experiences.

This report provides the framework for implementing low-cost social research which can provide valuable information. Unobtrusive observation is a relatively inexpensive and reliable method for collecting data about visitors in a variety of settings. The methods of observation provided in this report are presented to aid natural resource management organizations in learning more about their visitors. The report details general procedures to aid in the successful gathering of visitor data. With such data, resource managers will gain an understanding of their visitors which will greatly enhance their understanding and comprehensive management of the natural and cultural resources they manage.

This document provides an overview of: 1) how to sample the visitors, 2) how to conduct the research, and 3) how to use the observation form.

SAMPLING

Two rules of sampling for baseline data are:

- Set up a system of sampling times and site locations to yield a representative picture of site visitation.
- Establish a system which permits the best unobtrusive overview of the behavior under study.

Data gathering should be an ongoing function of the agency, rather than a one-time approach. Although the sampling time frame should be random, it must also be realistic. Sampling should cover a cross-section of times (morning, noon, afternoon, early and late evening), days of the week, and seasons of the year. For example, if your best estimate indicates that only 1% of the annual visitors attend a particular area on March mornings, then only 1% or so of the annual allotment of observation time should be devoted to March mornings. Likewise, if heavy flows of visitors on a July weekend normally account for 5% of the visitations, then sampling should also be heavy at those times. Thus, one might gather data throughout the day for the full weekend to obtain a representative visitor sample.

That fraction of a site's total visitation which is actually observed is referred to as the "sampling ratio." During heavy visitor flow, it might be possible to sample only every sixth group. Thus, the ratio would be 1:6. The sampling ratio should remain fixed over a period of 2 or 3 hours; afterwards, the researcher may decide to observe either a larger or smaller ratio of visitor groups, depending upon observation conditions. Consistently sampling the *nth* group as it comes within view maintains a random selection scheme for the observer and protects against biasing the sample. Such a system also lessens the danger of the observer's preferences and tastes influencing selection.

Each resource area is geographically different. Consequently, it is necessary to identify heavy use zones—places where certain activities such as depreciative behaviors are likely to occur — or nodes where significant features such as an interpretive sign have been placed. The observer must be aware of the potential for major observable behavior occurring at these points and must be positioned accordingly. Likewise, unusual or less visited areas should not be totally excluded. The goal is to gain an objective and unbiased overview of visitor behavior across the entire resource area over a period of time.

[1]This observation form and associated methodology are products of a Natural Diversity Research Program (The Ohio State University Research Foundation Project No. 714305) sponsored by the Columbus Foundation through the Ohio Dept. of Natural Resources (Division of Natural Areas and Preserves) and the Ohio Biological Survey. This project is part of State Special Project No. 319, funded by the Forest Service, U. S. Dept. of Agriculture, through the Ohio Agricultural Research and Development Center.

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PROCEDURES AND RECOMMENDED TECHNIQUES

Research procedures require observing all of the behaviors listed on the Visitor Observation Form; an example is included in this circular. It is extremely important that those observations be recorded quickly and accurately. Other non-categorized behaviors can be recorded on the back of the form, or in the special "other" category provided on the form.

As the name implies, the unobtrusive observer does not interact directly with the visitor or ask questions. The best approach is to simply try to blend inconspicuously with the visitors. Since personnel in uniform will usually be recognized, causing visitors to modify their behaviors, this type of dress for an observer should be avoided. If the observer is approached and questioned by a visitor, a fair and indepth explanation should be offered. Appropriate identification and letters of authorization should be carried by the observer.

Observers may range from employees of the resource management agency or contracted researchers to interns and volunteers. It is necessary that conscientious people committed to the task be selected and trained to gather data. Training should first include an orientation to the agency, the observation form, and the importance of non-biased sampling. Short trial periods of observation by a battery of observers viewing a limited number of groups on-site should follow. Inter-observer reliability should then be compared via a roundtable discussion so that each observer may gain a clearer picture of the technique. High inter-observer reliability yields more meaningful data. Oftentimes, on actual projects, observers work in pairs in order to validate each other's work. Finally, a senior staff member or researcher should carefully discuss each aspect of the observation form, how the group rated it, and why.

VISITOR OBSERVATION FORM

The Visitor Observation Form (page 3) was designed to aid observers in ordering and categorizing observable visitor behaviors. It is intended to serve as a model which may require modifications, depending on individual circumstances. The form is not intended to limit the observer's power of observation, but rather to provide an example of the types of data which may be gathered in unobtrusive observation studies. Open-ended commentary recorded on the back of the form may bring new topics to light and may serve as a basis for expanding the Visitor Observation Form for further studies of each particular area. (A tear-out sample form is also included on page 5. It may be removed from this circular and be used as a copy master.)

Observation form items and guidelines for coding are listed below. A separate observation form should be used for each group or individual observed.

- Enter SITE, DATE, DAY OF WEEK, and WEATHER on several forms prior to the beginning of each period of data collection. Where numbers appear (*i.e.*, Day of Week), enter the appropriate number in the corresponding box.
- Record TIME and TEMPERATURE each hour of the observation period. (Only a portion of the forms will reflect this pre-recorded entry.)
- Enter total NUMBER OF PERSONS IN THE GROUP in the corresponding blank.
- In AGES/SEXES OF GROUP MEMBERS, enter the actual number of individuals in the appropriate box where the observed age/sex intersect. Where no one of that age/sex group is present, enter zero. Each box should have an entry, *i e* a whole number or a zero.
- Estimated SOCIO-ECONOMIC STATUS should be noted only for purposes of general comparison on a grossly ordinal scale. Due to observer perspective and frame of reference, this category approaches the limits of valid observability. Estimates can be based upon observations of visitors' clothing, make and condition of automobile or other characteristics important to your organization. However, caution is warranted in the interpretation of these data.
- APPARENT PURPOSE OF VISIT, ARE PETS PRESENT WITH GROUP, PHOTOGRAPHY BY VISITORS, and FITNESS/SPORTS ACTIVITY are completed by entering appropriate number on the form in the corresponding box.
- Check all that apply to PET-RELATED PROBLEMS.
- The OTHER RECREATION ACTIVITIES section provides an opportunity for expanding the activities list based on open-ended observation
- VISITORS' RESIDENCE information is to be obtained from automobile license plates, county stickers, license plate holders or stickers where possible.
- GROUP COMPOSITION is to be filled in as indicated. Peer groups are defined as friendship groups where often members appear to be of similar age. Extended family is composed of a family unit (mother and/or father and/or child, plus aunts, uncles, grandparents, etc.). Combinations may occur and are to be listed as Other and described.
- MODE OF TRAVEL TO SITE, VISITORS' CLOTHING, and NATURE STUDY BY VISITORS are to be entered by number
- LEVEL OF COHESION, defined as the extent to which the group's members remain in close physical proximity with each other, is entered by number
- FAMILY STAGES PRESENT WITHIN GROUP may require entry of more than one number
- TRAILS UTILIZED is to be entered by number.
- VISITOR DEPRECIATIVE BEHAVIORS and INTERPRETIVE OPPORTUNITIES MISSED require checking all that apply.
- VISITORS' EQUIPMENT and LEVEL OF PARENTAL CONTROL WITHIN GROUP are to be entered by number. (Parental control is defined as

VISITOR OBSERVATION FORM

Site: _____

Sampling Ratio: 1/_____

_____ NUMBER OF PERSONS IN GROUP (Enter real number)

AGES/SEXES OF GROUP MEMBERS:
(Enter real numbers of each.)

	Male	Female
Und. 6		
6-12		
13-17		
18-24		
25-35		
36-50		
51-65		
66-up		

☐ ESTIMATED SOCIOECON. STATUS
1. Low
2. Lower Middle
3. Middle
4. Upper Middle
5. Upper
9. Unknown

☐ APPARENT PURPOSE OF VISIT
1. General
2. Nature Obs.
3. Fitness
4. Sports
5. Group Outing
6. Other _____
9. Unknown

☐ ARE PETS PRESENT WITH GROUP?
1. No
2. Yes, dog(s)
3. Yes, other _____
4. Yes, but pet(s) were left in vehicle
9. Unknown

PET-RELATED PROBLEMS
(Check all that apply.)
_____1. Not on leash
_____2. Straying off trail
_____3. Damaging vegetation
_____4. Noisy
_____5. Annoying other visitors
_____6. Chasing wildlife
_____7. Other _____
_____8. No problems observed
_____9. Not applicable

☐ PHOTOGRAPHY BY VISITORS
1. None observed
2. People only
3. Natural features (specify) _____
4. People + Nature
9. Unknown

☐ FITNESS/SPORTS ACTIVITY
1. None Observed
2. Aerobic Walking
3. Backpacking
4. Jogging
5. Running
6. Rockclimbing
7. Bicycling on trail
8. Other _____
9. Unknown

OTHER RECREATION ACTIVITIES
_____
_____

_____TIME OF DAY
a.m./p.m.

☐ WEATHER
1. Clear
2. Partly Cloudy
3. Overcast
4. Inclement
9. Unknown

☐ VISITORS' RESIDENCE
1. Ohio 2. IN 3. KY 4. PA
5. WV 6. Other_____ 9. Unknown

☐ GROUP COMPOSITION
1. Lone individual
2. Young couple
3. Peer group
4. Family
5. Extended Family
6. Family + friends
7. Organized Group
8. Other _____
9. Unknown

☐ MODE OF TRAVEL TO SITE
1. Subcompact Car
2. Compact Car
3. Midsize Car
4. Fullsize Car
5. Luxury Car
6. Van
7. Truck
8. Trk./Camper
9. 4WD/RV
10. Motorhome
11. Bus
12. Motorcycle
13. Bicycle
14. Walking
15. Multiple Vehicle
16. Other _____
55. N/A

☐ VISITORS' CLOTHING
1. Light walking
2. Heavy hiking
3. Street (dressy)
4. Jogging
5. Rockclimbing
6. Other _____
9. Unknown

☐ NATURE STUDY BY VISITORS
1. None Observed
2. General Sightseeing
3. Vegetation
4. Animals
5. Geologic Features
6. Other _____
7. Multiple of Above
9. Unknown

☐ LEVEL OF COHESION WITHIN GROUP
1. N/A 5. High
2. Very low 6. V. High
3. Low 9. Unknown
4. Med

Date: _____/_____/_____

☐ DAY OF WEEK
1. Sun 2. Mon 3. Tue 4. Wed
5. Thurs 6. Fri 7. Sat

_____ °F TEMPERATURE

☐ FAMILY STAGES PRESENT WITHIN GROUP
1. Non-family
2. Contracting couple
3. Young family (youngest child under 6 yrs.)
4. Middle family (youngest child 6-12 yrs.)
5. Older family (youngest child over 12 yrs)
6. Established family (no children present)
7. Pre-retirement (51-65 yrs. old)
8. Post-retirement (over 65 yrs.)

☐ TRAILS UTILIZED
1. None
2. Less than shortest
3. Shortest one
4. More than shortest
9. Unknown

VISITOR DEPRECIATIVE BEHAVIORS
(Check all that apply to area rules)
_____Off trail _____Wading
_____Wheeled vehicle
_____Picknicking _____Noise
_____Littering _____Vegetation damage
_____Geologic damage
_____Alcoholic bev.
_____Annoying others
_____Other _____
_____None observed

INTERPRETIVE OPPORTUNITIES MISSED
(Check all that apply)
_____Visitors unaware of/ignoring rules
_____Visitors confused about trails
_____Visitors missed natural feature specify _____
_____Visitors wanted interpretive message (specify _____)
_____Visitors seemed unaware of site's purpose
_____Visitors did not read bulletin board/signs
_____Other opportunities missed _____
_____No opportunities missed

☐ VISITORS' EQUIPMENT
1. None
2, Camera
3. Binocs
4. Radio
5. Carrier (pack)
6. Field Guides
7. Climb/Rappel
8. Other
9. Unknown

☐ LEVEL OF PARENTAL CONTROL WITHIN GROUP
1. No kids 5. High
2. Very low 6. V. high
3. Low 9. Unknown
4. Med.

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the extent to which adults in the group control the behavior of their children via physical and verbal means.)

The complete observation form and any additional observation notes the researcher may have entered on the back of the form should begin to supply an improved basis for decision-making to managers, interpreters, law enforcement personnel, and others who require social data.

DATA

Some type of data management system is necessary for analyzing the information collected via this form. Assistance is available from universities, the state data center, larger agencies, or individuals who understand data management and have access to appropriate computers.

Interpretation of the data should be handled by the resource management agency involved and other individuals with whom they wish to consult. Numerous colleges and universities employ faculty who have an interest and expertise in recreation, parks, and leisure. Many, such as land grant universities, offer such assistance as part of their extension and research functions. These individuals should be called upon when needed. Additionally, private consultants and units of large state organizations have data interpretation specialists who can be of assistance.

The means for data manipulation and interpretation are readily available; what is lacking are systenatically collected, long-term data which can add a new dimension to the management of visitors and natural resources. Unobtrusive observation is an excellent method for beginning the collection of such vital data.

CONCLUSIONS

Government agencies and quasi-public organizations concerned with the preservation of natural resource lands manage literally millions of dollars in prime real estate. Enhancing this tangible dollar value are the very real, almost inestimable values of the natural diversity contained within those properties.

These priceless sites are visited and utilized by a vast cross-section of the local public and non-resident tourists. Such visitors do not always exhibit the types of behaviors for which the sites are being managed; yet, neither can their visitation be considered as always detrimental to natural diversity.

To insure the integrity of natural resource areas and to preserve their cultural, scientific, educational, and recreational values for present and future generations, cost-effective biological and social scientific studies must be conducted. Such studies will provide information needed by natural resource decision-makers for effective planning, management, and administration. The implementation of sound natural, social, and fiscal resource management programs can result in measurable progress toward the conservation of natural areas.

Cost-effective research methods such as unobtrusive observation are readily available and easily initiated on natural resource sites. By using the observation form provided in this publication, and by following the guidelines offered earlier, it should be possible for any natural area organization to begin gathering and utilizing important social resource data. In this way, sound social resource management can be implemented to enhance existing organizational and natural resources management programs.

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